

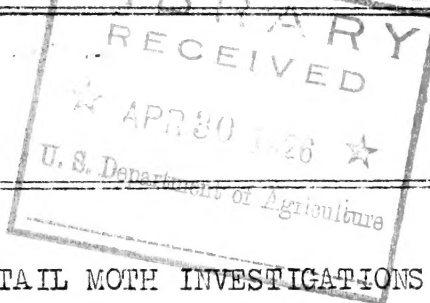
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GIPSY MOTH AND BROWN-TAIL MOTH INVESTIGATIONS

A. F. Burgess, Senior Entomologist, in Charge

R. T. Webber sailed February 20 on the S. S. Roosevelt for Cherbourg, France. His mission is a continuation of the investigations of the gipsy moth and brown-tail moth infestations in Europe. His trip will take him to France, Spain, Portugal, northern Africa, Italy, Germany, Austria, Hungary, Czechoslovakia, Poland, and the Balkans. He will endeavor to establish temporary summer laboratories wherever he locates places suitable for obtaining natural enemies of the two moths just mentioned, for shipment to the Gipsy Moth Laboratory, at Melrose Highlands, Mass. Mr. Webber will return to Melrose Highlands after having completed the season's work.

C. F. W. Muesebeck and R. C. Brown sailed for Europe March 24 on the S. S. Republic. They are first going to the European Corn Borer Laboratory at Hyeres, France, where R. T. Webber will meet them after having completed the first part of his trip. He will then accompany them to certain gipsy moth infestations in Germany, Czechoslovakia, and Hungary. Mr. Muesebeck's work in Europe will be an intensive study of the gipsy moth, the brown-tail moth, and their parasites. Such an investigation will necessitate his stay in Europe for two or more years. The moth conditions will be investigated in several countries, with an intensive study in the country where the gipsy moth infestation is best suited for these investigations. For the present his address will be Budapest, Hungary, care of the U. S. Consulate. During the summer R. C. Brown will assist Mr. Webber in his importation work, but will remain in Europe and assist Mr. Muesebeck during the winter.

We are glad to announce that C. E. Griswold returned to his work at the Gipsy Moth Laboratory on February 18. Mr. Griswold was confined for about one month on account of sickness, from which he has entirely recovered.

A. F. Burgess spent several days in conference at Washington, D. C., in the week of March 16.

The following entomologists have recently visited the Gipsy Moth Laboratory or office: Dr. Arthur Gibson, Chief, Entomological Branch, Ottawa, Canada; J. T. Ashworth, in charge of moth work for the State of Connecticut; H. L. McIntyre, of the Conservation Commission of the State of New York; D. J. Caffrey and L. H. Worthley, of the European Corn Borer project; L. B. Smith and C. W. Stockwell, of the Japanese Beetle project, and W. A. Osgood, of the New Hampshire State Experiment Station.

SOUTHERN FIELD-CROP INSECT INVESTIGATIONS

J. L. Webb, Associate Entomologist, Acting in Charge

As a result of the finding by Department inspectors of the *Thurberia* weevil in all the cotton area along the Santa Cruz River in Arizona, from a point 18 miles north of Nogales as far as what is known as the Postvale Tract, the State of Texas has placed a quarantine against the infested area. This action followed a conference held recently at Tucson, Ariz., between B. R. Coad and officials of Arizona and Texas. The counties involved in the area quarantined include Pima, Santa Cruz, Graham, Cochise, and part of Pinal, all in southeastern Arizona. On a recent trip of investigation Mr. Coad confirmed the reports that the infestation of the *Thurberia* weevil in cultivated cotton grown near Continental, Sahuarita, Tubac, and Cartaro was greater than ever before. Biological investigations conducted near Tucson during the past year by T. P. Cassidy indicate the probability that, if established in the western cotton areas, this pest will be even more injurious than the ordinary boll weevil or pink bollworm. For further protection against the possible spread of this insect into the western part of Texas, where the Mexican cotton boll weevil can not thrive, but where the *Thurberia* weevil can exist and do great damage, the State Department of Agriculture of Texas has asked the Federal Horticultural Board also to place a quarantine against the infested district.

Mr. Coad, on the same western trip, visited Yuma, Ariz., Calexico and El Centro, Calif., and Mexicali, Mexico, to investigate reports received that the cotton leaf perforator, *Bucculatrix thurberiella*, was becoming a serious pest of cotton, particularly in the Imperial Valley. This insect has been known to occur on cotton practically since its earliest planting in that vicinity, but opinions as to damage have varied considerably, and it is only in the last few years that fairly consistent injury seems to have developed. Investigation shows that in 1924 this pest apparently caused a loss of something in excess of 15 per cent in the cotton production of the Imperial Valley. It is estimated that one firm at Mexicali lost in a single season at least one and a half million dollars. Only fragmentary investigations have been made on this species, and comparatively little is known of its activities. For this reason it is planned to open a laboratory, probably at Calexico, in the very near future and undertake an intensive study of the pest.

W. A. Stevenson, who has been located for some time at the Florence, S. C., Boll Weevil Laboratory, has been transferred to the Arizona weevil investigations, with headquarters at Tucson. H. C. Young and A. J. Chapman, of the Tallulah laboratory, have been transferred to the same investigations.

A. C. Johnson, of the Tallulah laboratory force, has resigned, his resignation taking effect March 31.

The February number of the Archives of Dermatology and Syphilis contains a report of Dr. J. L. Kirby-Smith, W. E. Dove, and Dr. G. F. White, on a type of creeping eruption in man which is prevalent in Florida and other coastal States. The causative organism was first supposed to be an insect larva, but the work of the authors proves that the lesions are due to a nematode in the third instar. This new form is described in the paper as Agamanematodum migrans. An apparently very effective treatment was developed in the course of the work, and is now being employed by numerous physicians in the South.

TAXONOMIC INVESTIGATIONS

S. A. Rohwer, Entomologist, in Charge

C. T. Greene left early in March for Panama, where he will collect, rear, and associate larvae and adults of fruit flies for the Federal Horticultural Board. Mr. Greene's headquarters will be at Ancon, with Mr. Zetek. Fruit-fly larvae have been intercepted at quarantine many times, but, because they have never been carefully associated with the adults, it has been impossible to get specific identifications. It is expected that Mr. Greene's work in Panama will permit the association of the larvae and adults of the more common fruit flies of Central and South America. Mr. Greene will probably not return to Washington until the middle of June.

H. S. Peters, a postgraduate student of Ohio State University, spent his spring vacation at the Museum identifying his collection of Ohio Mallophaga and making notes on some of the material in the collection. Hugh Miley, another postgraduate student of Ohio State University, recently spent several days at the Museum studying the Myriapoda.

N. L. Cutler, instructor in biology at Cornell University, plans to visit the Division of Insects early in April to discuss the anatomy and classification of coleopterous larvae with Dr. Böving.

L. G. Gentner, of East Lansing, Mich., spent a number of days at the Museum in March, consulting collections of Coleoptera and conferring with Mr. Barber.

Prof. W. T. M. Forbes, of Cornell University, is expected to spend a few days early in April studying the collections of Lepidoptera and conferring with the lepidopterists of the Bureau.

BEE CULTURE INVESTIGATIONS

James I. Hambleton, Apiculturist, in Charge

Visitors at the Bee Culture Laboratory in the month of March included H. H. Root, General Manager of The A. I. Root Company, of Medina, Ohio; Virgil Argo, of Cornell University, Ithaca, N.Y.; and Dr. F. H. Lathrop, of the Bureau of Entomology.

TRUCK-CROP INSECT INVESTIGATIONS

J. E. Graf, Entomologist, in Charge

N. F. Howard and J. E. Dudley, Jr., Associate Entomologists, stationed at Columbus, Ohio, and Madison, Wis., attended the meetings of the North-Central States Entomologists at Urbana, Ill., March 4 and 5, and discussed the pea aphid and Mexican bean beetle projects.

J. E. Graf, representing the Federal Horticultural Board, attended the meeting of the Executive Committee of the Eastern Plant Conference Board, held March 10, at the American Museum of Natural History, New York City.

N. F. Howard, Associate Entomologist, left Columbus, Ohio, on March 20, for Birmingham, Ala., to make arrangements for the moving of the Mexican bean beetle laboratory to Columbus. Laboratory quarters have been obtained at 151 W. 11th Avenue, Columbus, directly across the street from the Ohio State University, and Mr. Howard expects to have his laboratory and equipment housed there about April 1. L. W. Brannon, Junior Entomologist, in charge of the Birmingham, Ala., Mexican bean beetle substation, accompanied Mr. Howard on his return to Columbus.

Rodney Cecil, Junior Entomologist, returned March 20 from the Iowa State College, Ames, Ia., where he had been on a leave-without-pay status, completing the necessary requirements towards a master's degree. En route to Columbus, Ohio, where he is at present, he visited Madison, Wis., where he conferred with J. E. Dudley, Jr., on methods of controlling the pea aphid. Mr. Cecil expects to leave Columbus for Geneva, N. Y., early in April.

In the latter part of March M. C. Lane and F. H. Shirck, of Toppenish, Wash., visited Walla Walla, Wash., where they found adult wireworms in activity. Their first investigations for the season will be conducted there, to take advantage of the early local appearance of the insect.

Dr. F. H. Lathrop, Entomologist, of Deciduous Fruit Insect Investigations, who during the winter months was conducting experiments on the celery leaf-tyer at Sanford, Fla., visited Washington for the purpose of conferring with Bureau officials regarding this work, before resuming his regular duties with the Deciduous Fruit Insect Investigations Division in Maine.

C. G. Wallace has severed his connection with the Mississippi State Plant Board, and has taken up work as County Agent. His collaboration with this Division terminated March 31.

JAPANESE BEETLE INVESTIGATIONS

Loren B. Smith, Entomologist, in Charge

E. Avery Richmond, of the Japanese Beetle Laboratory, addressed the Philusda Club of Philadelphia February 17 on "Recent Developments on Japanese Beetle Control." His talk was illustrated with a number of photographs and charts.

Dr. Arthur Gibson, Dominion Entomologist, spent February 20 at the Japanese Beetle Laboratory, Riverton, N. J., looking over the various phases of the investigational work.

H. C. Hockett, Entomologist at the New York Agricultural Experiment Station Laboratory, Riverhead, L. I., was recently at the laboratory for a day, conferring with members of the force on parasite investigations and chemotropic studies.

L. B. Smith and C. W. Stockwell were for several days in March at Melrose Highlands, Mass., conferring with the officials in charge of Gipsy Moth and European Corn Borer control.

J. S. Hauser, Entomologist at the Ohio Experiment Station, spent March 21 at Riverton, looking over the various phases of the Japanese beetle control work.

F. L. Gambrill, Assistant Entomologist at the Agricultural Experiment Station, Geneva, N. Y., spent several days in March at the laboratory, conferring on several lines of investigation.

L. B. Smith and J. L. King visited New Haven, Conn., March 25 and 26, conferring there with Dr. W. E. Britton and Director Slate, of the Connecticut Agricultural Experiment Station, on proposed control operations to be undertaken against the Asiatic beetle, Anomala orientalis Waterh. While there, Mr. Smith addressed a public meeting of residents of the community where the Asiatic beetle occurs.

J. B. Cronin, Junior Entomologist, recently resigned to accept a position with the American Cyanamid Company.

A recent reorganization of the quarantine division resulted in the placing of F. H. Worsinger, Jr., in charge of all the chemical treatments of soil and nursery stock, as required under the regulations of the Japanese beetle quarantine.

Luther Brown was recently transferred from the Japanese beetle quarantining work in Pennsylvania to Deciduous Fruit Insect Investigations, at Sligo, Md.

FOREST INSECTION INVESTIGATIONS

F. C. Craighead, Entomologist, in Charge

In the first week of March Drs. Blackman and Graham visited Washington to discuss plans for continuing projects in the Lake States and the Kaibab National Forest during the coming year. Cooperative arrangements with the Forest Service on the studies of the tip moth at Halsey, Nebr., were completed.

J. C. Evenden, of the Coeur d'Alene, Idaho, field station, visited the forest insect station at Palo Alto, Calif., in March. Plans were completed for cooperation with the National Park Service on insect-control projects. The summer schedule and assignments on certain research projects of the Division were also considered.

R. A. St. George recently spent ten days in the field examining experimental plots on the lands of the Great Southern Lumber Company at Bogalusa, La.

On March 11 and 12 Dr. T. E. Snyder took part in an inspection of a section of a test-pole line of the American Telephone and Telegraph Company between Quantico and Fredericksburg, Va. Squared, pine poles, after having been impregnated for their entire length with coal-tar creosote, by cylinder pressure process, were set, mostly in 1897. This is one of the oldest lines of creosoted poles in the United States. The very few failures due to insects or fungi were to be accounted for by season-checking which extended into the wood more deeply than did the preservative treatment. This pole line is still in excellent condition.

DECIDUOUS FRUIT INSECT INVESTIGATIONS

A. L. Quaintance, Associate Chief of Bureau, in Charge

O. I. Snapp, in charge of the Bureau's laboratory at Fort Valley, Ga., reports that the oriental peach moth has resumed activity in the South. The first spring pupation was recorded in the insectary at Fort Valley on February 24.

It is also reported from Fort Valley that the stock lubricating-oil emulsion commercially manufactured in Georgia has been standardized as a result of effort on the part of the Bureau's laboratory there. Some of the batches of this emulsion which have been made have been found by test to contain as little as 43 per cent of oil. The manufacturers have accepted 65 per cent by volume as the minimum oil content of this emulsion, and are making special effort to conform to that standard. If the standard is maintained the dilution heretofore recommended for use will have the strength desired for scale control.

Dr. F. H. Lathrop, who has been at Sanford, Fla., for several months, has now returned to his permanent headquarters at Harrington, Me., where he will continue investigations of the blueberry maggot.

CEREAL AND FORAGE INSECT INVESTIGATIONS

W. H. Larrimer, Entomologist, in Charge

The following members of the Cereal and Forage staff attended the meeting of the North-Central States Entomologists held at Urbana on March 4 and 5: W. H. Larrimer; W. B. Cartwright, W. B. Noble, J. R. Horton, A. F. Satterthwait, C. N. Ainslie, and L. H. Worthley.

D. J. Caffrey and L. H. Worthley, in charge of corn borer investigations, came to Washington March 24 for conference.

W. A. Baker, of the Dallas, Tex., substation, recently made a survey of the grain areas of Cooke, Collin, Grayson, and Denton Counties, Tex., in connection with his green bug investigations.

C. M. Packard, of the Sacramento, Calif., laboratory, in company with Roy Campbell, visited the Antelope Valley in the last week of February, to inspect the burning operations with aphids which are being conducted there.

On March 11 Dr. R. J. Tillyard, of the Cawthorn Institute of Scientific Research, New Zealand, and Mrs. Tillyard, called at the Forest Grove, Oreg., laboratory, accompanied by Commissioner H. C. Atwell, of the Oregon State Board of Horticulture. On the evening of March 12 Mr. Atwell entertained Dr. and Mrs. Tillyard at dinner at the Congress Hotel, Portland. Other guests were Prof. Don C. Mote, of the Oregon Agricultural College, Howard C. Stearns, who has been working on the tachinid parasites of the European earwig for the Oregon State Board of Horticulture, and L. P. Rockwood, of the Bureau of Entomology. Methods of handling the imported tachinid parasites of the earwig were discussed and Dr. Tillyard displayed some fine specimens of fossil insects.

H. G. Crawford, of the Canadian Entomological Branch, visited the Arlington, Mass., laboratory on March 6 for a conference regarding cooperative work on the European corn borer during the coming season.

L. H. Patch, of the Sandusky, Ohio, laboratory, visited Arlington on March 18 and 19 to obtain instructions relative to research activities at the Sandusky Laboratory during the coming season.

Preliminary arrangements have been completed between Michigan State College and the Bureau for the establishment of a cooperative laboratory in southeastern Michigan to study the various entomological and agronomic problems involving the European corn borer in that area. In the week of March 9 a preliminary meeting to discuss plans was held at Monroe by Professors R. H. Pettit and J. F. Cox, of the Michigan State College, and Doctor Luginbill and D. J. Caffrey of the Bureau.

K. W. Babcock sailed for Europe March 24 to continue his investigations on the European corn borer under European conditions and to assist in the collection of parasitic material. During the coming season this work will be greatly extended to include portions of the known infested area in Europe which have not been studied extensively heretofore.

Arlo M. Vance has been transferred from the Charlottesville, Va., laboratory to the corn borer work, and will assist K. W. Babcock in his European investigations. Mr. Vance reported at Arlington March 15 and sailed for Europe March 24.

Recent visitors to the Arlington laboratory included S. S. Crossman, C. W. Muesebeck, P. B. Dowden, W. A. Osgood, and P. W. Dempsey.

STORED-PRODUCT INSECT INVESTIGATIONS

E. A. Back, Entomologist, in Charge

On March 25 Dr. E. A. Back conferred with officials of D. Auerbach and Sons, candy manufacturers in New York City, with a view to aiding in the solution of their insect problems.

On March 9 Dr. R. T. Cotton was present at an interesting ship fumigation in Cleveland, Ohio, where powdered calcium cyanide was used.

In March the Newark Museum opened with a leather exhibit. This Bureau furnished the Museum with an interesting exhibit of insects and photographs illustrating damage to skins and hides.

In the first week in March A. O. Larson, of Bean Weevil Investigations, visited Stanislaus and Merced Counties in California to confer with County Farm Bureaus regarding the cooperative work planned for the coming season. In cooperation with the Bean Weevil Control Committee of the Merced County Farm Bureau, the Agricultural Extension Office at Merced arranged for meetings of bean growers at the farm centers of Stevinson, Hillmar, McSwain, Fruitland, Arena, Ballico, and Livingston. Much interest was shown by the attendance at these meetings. The growers admit that the bean weevil has caused a loss of from 10 to 25 per cent of their blackeye bean crop, and are just waking up to the fact that a large percentage of this loss can be eliminated by effective cooperation in applying the control methods advocated by the Bureau. It is needless to say that Mr. Larson has earned the hearty support of bean-growing interests and State agricultural officials.

Leith F. Hitchcock, of the Australian Commonwealth Prickly-pear Board, a member of J. C. Hamlin's staff in Australia some years ago, recently visited Mr. Hamlin at the Dried-Fruit Laboratory, Fresno, Calif. Mr. Hitchcock was en route from Brisbane, Australia, to Uvalde, Tex., where he will assume charge of the North American phase of this unique project in the biological control of noxious plants. He reports that very gratifying field results are being obtained with a number of the earlier introductions, cochineals being especially important. A more recent addition from the Argentine Republic (*Cactoblastis* sp.) has increased tremendously in a very brief period, the numbers increasing from 20,000 eggs in one generation to 3,000,000 eggs in the next. Mr. Hitchcock

expects to enlarge still further the number of enemies of the Australian cactus plant by securing valuable parasites found in Mexico by Messrs. Hamlin and Mortensen in 1923. Mr. Hitchcock now estimates the area infested by the prickly-pear in Eastern Australia at 60,000,000 acres, and its annual increase as more than 1,000,000 acres.

On March 22, J. C. Hamlin conferred with D. K. Grady, Secretary of the Dried Fruit Association of California, relative to the trend of cooperative investigations affecting dried-fruit insects.

The Dried-Fruit Insect Laboratory was recently visited by W. B. Camp, of the Cotton Experiment Station at Shafter, Calif.

The aid of the Dried-Fruit Insect Laboratory was recently enlisted by the Liberty Orchards Co. of Cashmere, Wash., to fight the depredations of the Indian-meal moth on the company's new apple-walnut confection. Experiments are being undertaken on the adaptability of carbon disulphide plus carbon dioxide, in vacuum, to meet the situation.

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Mabel Colcord, Librarian

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